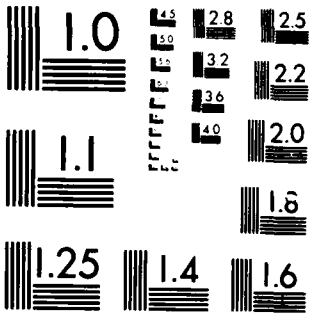
AD-A164 841 BLUG (BOTTOM LOSS UPGRADE) UPGRADES AND TEST AND EVALUATION(U) SCIENCE APPLICATIONS INTERNATIONAL CORP MCLEAN VA R R GREENE 01 OCT 85 SAIC-85/1829 1/1

UNCLASSIFIED N00014-84-C-0180 F/G 20/1 NL



(1)

AD-A164 841

FINAL REPORT
FOR CONTRACT N00014-84-C-0180, TASK 3
BLUG UPGRADES AND
TEST AND EVALUATION

SAIC-85/1829

SAIC™
Science Applications International Corporation

DTIC
ELECTE
MAR 0 4 1986
S D
D

DTIC FILE COPY

DISTRIBUTION STATEMENT A
Approved for public release;
Distribution Unlimited

86 3 3 109

(1)

FINAL REPORT
FOR CONTRACT N00014-84-C-0180, TASK 3
BLUG UPGRADES AND
TEST AND EVALUATION

SAIC-85/1829

SAIC
Science Applications International Corporation

Post Office Box 1303, 1710 Goodridge Drive, McLean, Virginia 22102, (703) 821-4300

N00014-84-C-0180
1 October 1985

Report SAIC-85/1829

FINAL REPORT FOR CONTRACT N00014-84-C-0180
TASK 3 - BLUG UPGRADES AND TEST AND EVALUATION

Prepared by

Robert R. Greene

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION
1710 Goodridge Drive
McLean, VA 22102

1 October 1985

Final Report

Distribution unlimited

Prepared for

Naval Ocean Research and Development Activity
AEAS Program Office, Code 270
NSTL Station, MS 39529

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER SAIC-85/1829	2. GOVT ACCESSION NO. AD-A164 941	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Final Report for Contract N00014-84-C-0180, Task 3 - BLUG Upgrades and Test and Evaluation		5. TYPE OF REPORT & PERIOD COVERED Final Report 1/3/84-1/2/85 FR: 3/2/85 6. PERFORMING ORG. REPORT NUMBER SAIC-85/1829
7. AUTHOR(s) Robert R. Greene		8. CONTRACT OR GRANT NUMBER(s) N00014-84-C-0180
9. PERFORMING ORGANIZATION NAME AND ADDRESS SAIC 1710 Goodridge Drive McLean, VA 22102		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS Task 3
11. CONTROLLING OFFICE NAME AND ADDRESS Naval Ocean Research and Development Activity NSTL Station, MS 39529		12. REPORT DATE 1 October 1985 13. NUMBER OF PAGES
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office) Office of Naval Research Department of the Navy 800 North Quincy Street Arlington, VA 22217		15. SECURITY CLASS. (of this report) Unclassified 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Unlimited

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Bottom Loss, Test, Evaluation, Shallow Water, Korea Straits

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Database upgrades and test and evaluation support at SAIC for the Bottom Loss Upgrade (BLUG) test and evaluation process is summarized in the formal and final report for ONR contract number N00014-84-C-0180, Task 3.

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE
S/N 0102-LF-014-6601

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

TABLE OF CONTENTS

FINAL REPORT FOR CONTRACT N00014-84-C-0180, TASK 3 - BLUG UPGRADES AND TEST AND EVALUATION

1. INTRODUCTION

1.1 Contract Information. This document is the final report for Office of Naval Research Contract Number N00014-84-C-0180, Task 3. The work under this contract was conducted by Science Applications International Corporation (SAIC) during the period from 3 January 1984 through 2 January 1985.

2. TASK 3 - BLUG UPGRADES AND TEST AND EVALUATION

2.1 Background. SAIC developed the Bottom Loss Upgrade (BLUG) database, extraction software, and documentation for the AEAS program. The BLUG database is a world-wide Northern hemisphere database of acoustical and geophysical properties of ocean bottom sediments. On 1 October 1985, the beginning of Fiscal year 1985, the Naval oceanographic Office (NAVOCEANO) assumed responsibility for the maintenance and distribution of the BLUG database. During the period of the contract, the database was undergoing testing and evaluation for installation at Fleet Numerical Oceanographic Center at Monterey.

2.1.1 Evaluation Process. As the developer of the BLUG data base, SAIC was tasked to support the evaluation process by supplying information about the development process, as well as to suggest techniques for improvements to the database as requirements were developed in the evaluation process. Two potential problem areas, sediment and basement reflectivity, were identified in the statement of work.

2.1.2 Database Approval. The evaluation process proceeded smoothly and SAIC participated in meetings as directed. However, no requirements for upgrades were identified during the evaluation process. The database was approved for use and became operational at FNOC on 1 April 1985.

2.1.3 Korea Strait. SAIC was tasked to proceed with an upgrade of the BLUG database in the strategic shallow water area of the Korea Strait. Following procedures developed for the original deep-water BLUG, geoacoustic areas were developed for the Korea Strait. These areas were chosen so that both sediment and basement reflectivity, and basement roughness would be fairly homogeneous over any given area. The determination of sediment reflectivity was based on an analysis of sediment cores with respect to:

(a) surface sediment type,
(b) surface grain size, and
(c) sediment deposition processes and layering.

The determination of basement reflectivity was based on an analysis of seismic profiles with respect to:

(a) bulk sediment type,
(b) sediment thickness, and
(c) sediment basement roughness.

Geoacoustic parameters consistent with the original BLUG format were developed for each of the areas.

2.2 BLUG Test and Evaluation. SAIC personnel associated with the development of the BLUG database (Charles Spofford, Robert Greene, William Monet, and William Renner) participated in various telephone conversations with members of the BLUG evaluation committee; included were the NORDA AEAS Program Managers, personnel from the Naval Oceanographic Office (NAVOCEANO), Planning Systems, Inc. (PSI), and Defense Systems, Inc. William Renner of SAIC attended a meeting of the evaluation committee at Fleet Numerical Oceanography Center (FNOC) in October 1984.

2.3 BLUG Upgrades. The upgrade of the BLUG database to include the strategic shallow water area of the Korea Strait is documented in SAIC Report No. SAIC-85/1825. This report was developed under the associated Task 5 of this contract entitled "BLUG Maintenance and Distribution." It contains an overview of the geology of the Korea Strait, a description of the methodology used to develop the areas, a map of BLUG geoacoustic areas together with a documentation sheet for each area, and a map of sediment thickness.

END

FILMED

4-86

DTIC